JOURNAL OF PLASMA PHYSICS

VOLUME 28
1982

CAMBRIDGE UNIVERSITY PRESS
CAMBRIDGE
LONDON NEW YORK NEW ROCHELLE
MELBOURNE SYDNEY

Published by the Press Syndicate of the University of Cambridge
The Pitt Building, Trumpington Street, Cambridge CB2 1RP
32 East 57th Street, New York, N.Y. 10022

© Cambridge University Press 1982

Printed in Great Britain at the University Press, Cambridge

CONTENTS TO VOLUME 28

PART 1 AUGUST 1982

Hydrodynamic theory of drift Kelvin-Helmholtz instabilities. A. B. MIKHAILOVSKII *page* 1

Stationary waves at the interface between a plasma stream and a magnetic field. B. K. SHIVAMOGGI 13

Filamentation and collapse of Langmuir waves in a weak magnetic field. P. ROLLAND and S. G. TAGARE 19

Electron acceleration by stochastic wave packets. P. ROLLAND 37

On the evolution of normal ionizing shock waves in helium. V. S. SYNAKH and V. V. ZAKAJDAKOV 53

Thermal conductivity in a laser-created plasma heated by inverse bremsstrahlung absorption. R. BALESCU 65

Wave propagation in the presence of a spatially uniform external periodic magnetic field in two-temperature plasma. S. K. GHOSH 93

Finite-n ballooning mode theory for axisymmetric toroidal plasmas. R. W. MOORE and D. DOBROTT 103

Stability of a positive column in the presence of an axial magnetic field. M. S. UBEROI and C. Y. CHOW 113

Alfvén soliton in a low-beta plasma. P. K. SHUKLA, H. U. RAHMAN and R. P. SHARMA 125

Computer simulation of synchrotron radiation in two dimensions. L. T. WANG, J. M. DAWSON, A. T. LIN, C. R. MENYUK and T. TAJIMA 133

A formulation for computation of a class of collision-free plasmas in two dimensions. J. W. DUNGEY 141

Decay of the lower-hybrid wave into an ion cyclotron mode and a whistler wave. M. K. SAXENA 149

Nonlinear transient signal propagation in homogeneous plasma. D. JOVANOVIĆ, H. L. PÉCSELI and K. THOMSEN 159

The effects of thermal motion of neutrals on the non-potential instabilities in a weakly ionized sodium plasma. V. J. ŽIGMAN and B. S. MILIĆ 177

Constitutive relation for slowly varying warm plasmas. K. SUCHY 185

PART 2 OCTOBER 1982

Anomalous transport coefficients in a magnetized turbulent plasma. X. QIU and R. BALESCU 193

Nonlinear wave interactions in a collisionless space and time dependent warm fluid plasma. J. LARSSON 215

A study of the mass ratio dependence of the mixed species collision integral. A. J. M. GARRETT 233

The effect of magnetic shear on the crossfield current-driven ion-acoustic instability. R. BHARUTHRAM and M. A. HELLBERG 255

A linear and quasi-linear investigation of the crossfield current-driven ion-acoustic instability. R. BHARUTHRAM and M. A. HELLBERG 267

Investigation of plasma–wall interaction by H alpha resonant scattering in the tokamak UNITOR. G. Reinhold, J. Hackmann and J. Uhlenbusch 281

The mean electromotive force generated by random Alfvén waves in a collisionless plasma under a non-uniform mean magnetic field. T. Namikawa and H. Hamabata 293

The mean electromotive force generated by random hydromagnetic waves in a collisionless plasma. T. Namikawa, H. Hamabata and Y. Hosoya 299

The mean electromotive force generated by random Alfvén waves in a collisionless non-uniform plasma. H. Hamabata, T. Namikawa and Y. Hosoya 309

Similarity solutions for nonlinear damping of Alfvén waves. J. F. McKenzie 317

Magneto-acoustic oscillations as a plasma diagnostic technique for a current-carrying plasma column. M. H. Brennan, A. L. McCarthy and M. L. Sawley 325

Fast magnetic field-line reconnexion in a compressible fluid. Part 1. Coplanar field lines. A. M. Soward and E. R. Priest 335

Cylindrical plasma equilibria maintained by means of a rotating magnetic field. W. N. Hugrass 369

Part 3 December 1982

Stability of solitary wave solutions of simultaneous nonlinear Schrödinger equations. J. C. Bhakta and M. R. Gupta 379

The crossfield current-driven ion-acoustic instability in a collisional plasma. R. Bharuthram, M. A. Hellberg and R. D. Lee 385

The shear Alfvén continuous spectrum of axisymmetric toroidal equilibria in the large aspect ratio limit. C. E. Kieras and J. A. Tataronis 395

Fast magnetic field-line reconnexion in a compressible fluid. Part 2. Skewed field lines. A. M. Soward 415

Generalized expressions for momentum and energy losses of charged particle beams in non-Maxwellian multi-species plasmas and spherical symmetry. S. Cuperman, I. Weiss and M. Dryer 445

Evolution of nonlinear Alfvén waves propagating along the magnetic field in a collisionless plasma. M. Khanna and R. Rajaram 459

Growth rates of bending KdV solitons. E. W. Laedke and K. H. Spatschek 469

Stochasticity in plasmas with electromagnetic waves. J. T. Mendonça and F. Doveil 485

Nonlinear stability of doublets against axisymmetric resistive MHD modes. T. H. Jensen and F. W. McClain 495

Electromagnetic cyclotron-loss-cone instability associated with weakly relativistic electrons. H. K. Wong, C. S. Wu, F. J. Ke, R. S. Schneider and L. F. Ziebell 503

Lower-hybrid instability in current-carrying plasmas. J. E. Willett and H. Mehdian 527

Nonlinear interaction of spherical waves in a homogeneous isotropic plasma. J. C. CERISIER 539

Collisionless electrostatic interchange instabilities. S. P. GARY and M. F. THOMSEN 551

Energy transfer in magnetized plasmas. L. NOCERA 565

AUTHOR INDEX TO VOLUME 28 575